

## REMARKS

Reconsideration of the above-identified patent application in view of the amendment above and the remarks below is respectfully requested.

Claims 5, 12, 14, 22, 29 and 31 have been canceled in this paper. Claims 1, 6, 13, 16, 23, 30 and 58 have been amended in this paper. No new claims have been added in this paper. Therefore, claims 1, 6-9, 11, 13, 16-18, 23-26, 28, 30 and 58 are pending. Of these claims, claims 16-18, 23-26, 28, 30 and 58 have been withdrawn as being directed to non-elected species. Therefore, claims 1, 6-9, 11 and 13 are under active consideration.

Claims 1, 5-9 and 11-14 stand rejected under 35 U.S.C. 103(a) "as being unpatentable over Applicant's admitted prior art (Kingston (US 3616015), Parker et al. (US 4935300) and Laprade (US 6099944)) in view of McCurry et al. (US 6391415) and Makar et al. (US 5891520), generally as set forth in section 4 of Office action dated 1/27/2005, together with the following additional reasoning and response to argument." In support of the rejection, the Patent Office states the following:

First, it is noted that independent claim 1 has been amended to recite, *inter alia*, "...(a) a carrier, said carrier consisting of a paper substrate overcoated with a layer of polyethylene; (b) a wax skim coat deposited onto said polyethylene layer of said carrier; and (c) ...said binder comprising a copolyester resin...".

Second, for the purpose of clarification, the Examiner repeats the relied upon prior art as follows: In the Background of the Invention, Applicant has admitted that it is known art that heat-transfer labels are typically constructed as part of a heat-transfer label assembly, with one or more heat-transfer labels printed on a removable carrier web (page 1, third paragraph). Kingston teaches that a wax release layer can be affixed to the paper sheet, and an ink design layer is printed on the wax release layer (page 1, bottom paragraph). Parker teaches that the paper carrier web can be overcoated with a release layer of thermoplastic polyethylene to replace or obviate the need for a wax release layer (page 3, top

paragraph). Laprade teaches an improvement over Parker by adding a skim coat of carnauba wax overcoated onto the polyethylene release layer to improve the release of the transfer label from the polyethylene-coated carrier web (page 4, top paragraph).

For claim 1, for the newly amended elements (a) and (b) of instant invention, the Examiner notes Parker<sup>1</sup> and Laprade do teach amended elements (a) and (b), respectively, as set forth above. It should be noted that, in the absence of unexpected results, the selection of a known material based on its suitability for its intended use supported a *prima facie* obviousness determination. See MPEP § 2144.07. As to the newly amended element (c), the Examiner repeats that while Applicant's admitted prior art lacks express teachings regarding the amount of crosslinking resin and that the ink design layers are thermosetting within about 1-2 minutes at 250-325°F, it is noted that McCurry's invention is directed to a heat-transfer label, and McCurry expressly teaches that a heat-activated, cross-linking agent may be added in at least one of the color coat to improve water soak resistance. Preferably, the heat-activated, cross-linking agent is selected from the group consisting of urea and melamine formaldehyde, which has an activation temperature of greater than about 250°F, and preferably about 380°F (column 3, lines 8-18; column 8, lines 65-67). Additionally, the Examiner notes that the prior statement that "it is common knowledge that crosslinked melamine formaldehyde is inherently a thermoset polymer" is now taken as admitted prior art, because Applicant failed to specifically point out any supposed error in Examiner's position in prior responses. Further, although McCurry is silent about the amount of melamine formaldehyde and time required for thermosetting, since McCurry's heat-transfer process is essentially the same as the instantly claimed invention, it is the Examiner's position that a suitable amount of melamine formaldehyde and time for thermosetting are either anticipated by McCurry, or obvious optimizations to one skilled in the art, motivated by the desire to thermoset ink design layer timely. In summary, it would have been obvious to one of ordinary skill in the art to modify Applicant's admitted prior art to incorporate McCurry's melamine formaldehyde into the ink design layers, motivated by the desire to improve the water soak resistance of the label. Finally regarding the newly added limitation that the binder comprises a copolyester, it is noted that

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<sup>1</sup> Applicant respectfully submits that Parker does not teach element (b) (see pages 2-3 of the present specification).

Makar's invention is also directed to a transfer label, and Makar expressly discloses in Example I a heat-set ink comprising Vitel® 2700 binder, which is a copolyester resin having a high tensile strength and a low elongation (column 5, lines 7-37), and the Examiner notes that, in the absence of unexpected results, the selection of a known material based on its suitability for its intended use supported a *prima facie* obviousness determination. See MPEP § 2144.07.

With respect to Applicant's argument "...the Patent Office has provided no explanation as to why one of ordinary skill in the art would have been motivated to combine the references..." (Remarks, page 11, bottom paragraph), and arguments regarding Kingston, Laprade and McCurry references individually (Remarks, pages 13-20), the Examiner repeats that the recited limitations (a) and (b) are clearly well known prior art, and in the absence of unexpected results, the selection of a known material based on its suitability for its intended use supported a *prima facie* obviousness determination. In particular, other than pointing out structural differences between prior references and instant invention individually, the Examiner repeats that Applicant fails to provide any evidentiary support that the use of a wax skim coat would have necessarily required a protective lacquer to the transfer label to be functional, and it is well settled that Attorney arguments cannot take the place of evidence. It should be noted that the fact that, in the absence of a specific reasoning, merely pointing out that prior art discloses additional structure not claimed is insufficient as an evidence that the additional structure is integrally required for enablement. In particular, it is not seen how a functionally unrelated protective layer would have affected the releasing property of the releasing layer.<sup>2</sup> Additionally, Applicant's argument "McCurry regards both protective clear coat layer...and color coat layer...as indispensable components" (Remarks, page 19, bottom paragraph) clearly fails to recognize that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Finally, the Examiner notes that Applicant's argument also appears to be arguing against the instantly claimed invention as not enabling.

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<sup>2</sup> Because the protective layer is positioned between the release layer and the ink layer, the nature of the protective layer necessarily affects the releasing property of the releasing layer. For example, if the protective layer has poor adhesion to the ink layer, it will not release as well from the release layer.

With respect to Applicant's argument "The Patent Office has failed to explain why ...one of ordinary skill in the art would have been motivated to replace Kingston ink design...with McCurry color coat layer" (Remarks, page 20, middle paragraph), the Examiner respectfully reminds that nowhere the Examiner has suggested replacing Kingston ink design with McCurry color coat layer, and repeats that it would have been obvious to one of ordinary skill in the art to *modify* Applicant's admitted prior art to incorporate McCurry's melamine formaldehyde *into* the ink design layers, motivated by the desire to improve the water soak resistance of the label, motivated by the desire to improve the water soak resistance of the label, as set forth above. Applicants' argument is without merit to the present rejection.

Finally, with respect to Applicant's argument "McCurry explicitly teaches that it is **preferable** for cross-linking to be prevented during label transfer, one of ordinary skill in the art would not have been motivated...to add a catalyst to the crosslinking agent to reduce the activation temperature at which cross-linking occurs since this would have the **exact opposite result**." (Remarks, page 22, top paragraph), the Examiner repeats that McCurry also teaches that "because of the mechanics of transferring a label, the heat-activated, crosslinking agent may have an activation temperature down to equal or about equal to the activation temperature of the adhesive and still perform satisfactory" (column 3, lines 22-26). As such, McCurry does teach lower activation temperatures for the ink design layer. In other words, McCurry's teaching does encompass the embodiment as claimed, the fact that McCurry also teaches preferable embodiment is irrelevant. (Emphasis in original.)

Insofar as the subject rejection pertains to claims 5 and 14, the rejection is moot in view of Applicant's cancellation herein of claims 5 and 14. Insofar as the subject rejection pertains to claims 1, 6-9, 11 and 13, Applicant respectfully traverses the subject rejection.

Claim 1, from which claims 6-9, 11 and 13 depend, has been amended herein and now recites "[a] heat-transfer label assembly, said heat-transfer label assembly consisting of:

(a) a carrier, said carrier consisting of a paper substrate overcoated with a layer of polyethylene;

(b) a wax skim coat deposited onto said polyethylene layer of said carrier, said wax skim coat having a thickness of about 0.1-0.4 lbs. per 3000 square feet; and

(c) a heat-transfer label, said heat-transfer label being deposited directly onto said wax skim coat for transfer of said heat-transfer label from said carrier to an article under conditions of heat and pressure, said heat-transfer label consisting of one or more ink design layers, each of said ink design layers being thermosetting and comprising a binder, a colorant and a cross-linking system, said binder comprising a copolyester resin and a vinyl chloride/vinyl acetate resin, said cross-linking system comprising (i) a cross-linking resin for cross-linking said binder, said cross-linking resin comprising a melamine-formaldehyde resin and (ii) a heat-activatable catalyst for catalyzing said cross-linking within about 1-2 minutes after said ink design layer has been transferred to an article that has been pre-heated, prior to label transfer, to a temperature of about 250°F-325°F, said heat-activatable catalyst comprising an amine-blocked sulfonic acid catalyst.”

Claim 1 is patentable over the applied combination of “Applicant’s admitted prior art (Kingston, Parker et al., and LaPrade et al.)” in view of McCurry et al. and Makar et al. for a number of reasons. First, apart from the specifics of the claimed ink design layer, the references, either taken individually or in combination, do not teach or suggest the general arrangement of layers in the claimed heat-transfer label, the claimed heat-transfer label **CONSISTING** of (i) a paper substrate overcoated with a polyethylene layer; (ii) a wax skim coat having a thickness of about 0.1-0.4 lbs. per 3000 square feet; and (iii) a heat-transfer label applied directly to the wax skim coat and **consisting** of one of more ink design layers. Kingston differs from the claimed construction, *inter alia*, in that (i) Kingston uses a paper substrate, instead of a paper substrate overcoated with polyethylene and (ii) Kingston uses a wax release layer that requires post-flaming, instead of a wax

skim coat. Parker differs from the claimed construction, *inter alia*, in that (i) Parker does not include a wax skim coat and (ii) Parker uses a heat-transfer label that includes both a protective layer and an adhesive layer, in addition to an ink design layer. Laprade differs from the claimed construction, *inter alia*, in that Laprade uses a heat-transfer label that includes both a protective layer and an adhesive layer, in addition to an ink design layer. McCurry differs from the claimed construction, *inter alia*, in that (i) McCurry uses paper or extruded plastic film, as opposed to polyethylene-coated paper; (ii) McCurry does not include a wax skim coat; and (iii) McCurry uses a heat-transfer label that includes, at a minimum, a protective clear coat, in addition to an ink design layer. Finally, Makar is completely unrelated to the claimed invention as Makar does not even relate to a heat-transfer label, but rather, is directed to a method of decorating glass articles by **directly screen-printing an ink** onto the glass articles.

The Patent Office attempts to cure this deficiency in the prior art by seemingly mixing and matching various elements from Kingston, Parker et al., Laprade et al., McCurry et al. and Makar et al. in an attempt to arrive at the claimed arrangement of layers. However, Applicant respectfully submits that the Patent Office has failed to demonstrate why one of ordinary skill in the art would have been motivated to modify the prior art in the manner proposed by the Patent Office. Applicant has detailed in previous responses (incorporated herein by reference) myriad differences among the references, this being done for the purpose of explaining why one of ordinary skill in the art would not have been motivated to make the kind of changes proposed by the Patent Office. The Patent Office appears to be discounting the significance of all of these differences and taking the position that virtually any conceivable modification is acceptable unless Applicant can prove unexpected results. Applicant respectfully submits that such a position is improper as it constitutes an

impermissible shifting of the burden from the Patent Office to Applicant. Applicant respectfully submits that, before Applicant must come forward with unexpected results, the Patent Office must make a prima facie case of obviousness. Applicant respectfully submits that the Patent Office has failed to meet its burden.

Furthermore, the Patent Office has compounded this problem by failing to state explicitly and clearly exactly what teachings are being attributed to each reference and how these teachings are proposed to be combined. For example, despite any stated basis for doing so, the Patent Office has seemingly combined Kingston, Parker et al. and Laprade et al. into a new and distinct entity referred to by the Patent Office as “Applicant’s admitted art.” Putting aside for the moment the fact that these references relate to substantially different classes of heat-transfer labels and are not properly combinable, the Patent Office does not explain how “Applicant’s admitted art” is proposed to be modified by the secondary references of McCurry and Makar. For example, the Patent Office states at page 7 of the Office Action that “it would have been obvious to one of ordinary skill in the art to *modify* Applicant’s admitted prior art to incorporate McCurry’s melamine formaldehyde *into* the ink design layers....” (Emphasis in original.) However, this statement does not convey whether the Patent Office is referring to the ink design layer of Kingston or of Parker or of Laprade. To the extent that the Patent Office is presuming that the ink design layers of Kingston, Parker and Laprade are interchangeable, notwithstanding the fact that they are chemically dissimilar and form parts of different classes of heat-transfer labels, Applicant respectfully submits that the Patent Office is in error. Similarly, with respect to Makar, the Patent Office fails to explain which primary reference is proposed to be modified by Makar, in what way the reference is proposed to be modified by Makar, and why one of ordinary skill in the art would have been motivated to make the modification.

As Applicant has noted above, Makar does not even relate to a heat-transfer label; consequently, there would not seem to have been any motivation for modifying any of the primary references in view of Makar.

In addition, claim 1 is further patentable over the applied combination of references for the reason that the references fail to teach or to suggest the composition of the claimed one or more ink design layers. Each of the claimed ink design layers comprises a binder, a colorant and a cross-linking system, said binder comprising a copolyester resin and a vinyl chloride/vinyl acetate resin, said cross-linking system comprising (i) a cross-linking resin for cross-linking said binder, said cross-linking resin comprising a melamine-formaldehyde resin and (ii) a heat-activatable catalyst for catalyzing said cross-linking within about 1-2 minutes after said ink design layer has been transferred to an article that has been pre-heated, prior to label transfer, to a temperature of about 250°F-325°F, said heat-activatable catalyst comprising an amine-blocked sulfonic acid catalyst. None of the references teach or suggest a heat-transfer label that comprises, among other things, (i) a binder comprising a copolyester resin and a vinyl chloride/vinyl acetate resin and (ii) a cross-linking resin of melamine-formaldehyde. Moreover, while McCurry admittedly discloses a cross-linking resin, the Patent Office is in error in apparently assuming that one of ordinary skill in the art would have been motivated to improve the water soak resistance of the other referenced labels and that there would have been a reasonable expectation that, despite the differences in the base resins that are proposed to be cross-linked and despite the differences in the overall label constructions, the addition of a cross-linker would serve its intended purpose.

Furthermore, to the extent that the Patent Office's position is predicated on its understanding that "McCurry's heat-transfer process is essentially the same as the instantly claimed invention,"



Applicant respectfully disagrees. McCurry teaches, at col. 5, lines 26-42, that, prior to labeling, the article being labeled is heated to between about 120°F and 220°F, preferably about 150°F. After label transfer, the temperature of the article is increased to about 380°F to activate the cross-linker. By contrast, the claimed heat-transfer label is applied to an article that has been pre-heated to a temperature of about 250°F-325°F (as compared to McCurry's range of about 120°F-220°F). Moreover, whereas McCurry teaches heating the label after transfer, the claimed heat-transfer label does not require any post-heating. Consequently, it cannot fairly be said that "McCurry's heat-transfer process is essentially the same as the instantly claimed invention."

Lastly, Applicant wishes to incorporate by reference his previous comments regarding the applied references and respectfully submits that nothing in this response is to be construed by the Patent Office as an implied admission of prior art or as an admission that the present invention is not enabling. Throughout the prosecution of the present application, Applicant has limited his remarks, for the sake of clarity, to the more salient points. If Applicant were to address every point made by the Patent Office, the import of the more salient points would be obscured.

Accordingly, for at least the above reasons, the subject rejection should be withdrawn.

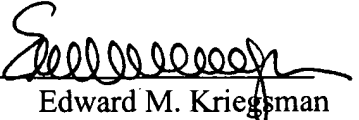
In conclusion, it is respectfully submitted that the present application is in condition for allowance. Prompt and favorable action is earnestly solicited.

If there are any fees due in connection with the filing of this paper that are not accounted for, the Examiner is authorized to charge the fees to our Deposit Account No. 11-1755. If a fee is

required for an extension of time under 37 C.F.R. 1.136 that is not accounted for already, such an extension of time is requested and the fee should also be charged to our Deposit Account.

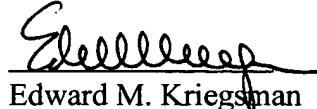
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on April 26, 2006.

  
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